

CLAIMS:

We claim:

1. A rope management device comprising:
 - an upper brake having a first pivot hole, a second pivot hole, and a handle;
 - a lower brake having a third pivot hole and a fourth pivot hole;
 - a first sideplate rotatably affixed to a first side of the upper brake at the first pivot hole and rotatably affixed to a first side of the lower brake at the fourth pivot hole;
 - a second sideplate rotatably affixed to a second side of the upper brake at the first pivot hole and rotatably affixed to a second side of the lower brake at the fourth pivot hole;
 - a third sideplate rotatably affixed to the first side of the upper brake at the second pivot hole and rotatably affixed to the first side of the lower brake at the third pivot hole; and
 - a fourth sideplate rotatably affixed to the second side of the upper brake at the second pivot hole and rotatably affixed to the second side of the lower brake at the third pivot hole.
2. The device of claim 1, the first and third sideplate configured to limit a minimum value of an angle with a vertex at the first pivot hole, a first endpoint at the second pivot hole, and a second endpoint at the fourth pivot hole.
3. The device of claim 2, the first sideplate comprising a stop that is configured to limit a maximum value of the angle when the stop contacts the third sideplate.
4. The device of claim 1, the first sideplate and the second sideplate further comprising a first hole that is substantially aligned with the first pivot hole, wherein the first hole and the first pivot hole have a diameter large enough to accept a connector.
5. The device of claim 4, the connector comprising one chosen from the group consisting of a rope, a cable, a lanyard, and a carabiner.
6. The device of claim 4, the first sideplate and the second sideplate further comprising a second hole that is substantially aligned with the fourth pivot hole, wherein the second hole and the fourth pivot hole have a diameter large enough to accept one chosen from the group consisting of a bolt, pin, or rivet.

7. The device of claim 1, the second sideplate configured to be detached from the upper brake at the first pivot hole and the fourth sideplate configured to be detached from the lower brake at the third pivot hole such that the second and fourth sideplates may be rotated to unblock a channel between the upper brake and the lower brake.

8. A rope management device comprising:

a first braking surface;

a second braking surface; and

a quadrilateral linkage configured to adjust a distance between the first braking surface and the second braking surface.

9. The device of claim 8, the quadrilateral linkage further comprising a parallelogram linkage.

10. The device of claim 8, wherein the quadrilateral linkage comprises:

four sideplates, the four sideplates and the braking surfaces collectively forming a channel configured to hold a rope between the first and second braking surfaces.

11. The device of claim 10, further comprising:

an upper brake with a handle, the upper brake including the first braking surface; and

a lower brake, the lower brake including the second braking surface.

12. The device of claim 10, each of the four sideplates comprising:

a hole, two of the four holes aligned with a first vertex of the quadrilateral linkage and the other two holes aligned with a second vertex of the quadrilateral linkage, the first vertex and the second vertex opposite each other.

13. The device of claim 12, the first braking surface and the second braking surface configured to decrease a width of the channel and rotate the channel in a first direction when the first and second vertices are moved apart by a first force.

14. The device of claim 13, the first braking surface and the second braking surface configured to increase the width of the channel and rotate the channel in a second direction when the first and second vertices are moved together by a second force.

15. The device of claim 13, the first braking surface and the second braking surface configured to increase the width of the channel and rotate the channel in a second direction when a second force is applied at the handle that tends to push the first vertex and the second vertex together.

16. A rope management device comprising:

- a first and a second brake;

- a first and a second hole penetrating through the first and second brakes, respectively;

- a first and a second bolt hole penetrating through the first and second brakes,

respectively;

- a first and a second bolt located inside the first and the second bolt holes, respectively;

- a first and a second bushing located inside the first and second holes, respectively,

each end of the first and second bushings having a collar, a distance between the collars on the first bushing and a distance between the collars on the second bushing greater than a thickness of the first brake and a thickness of the second brake, respectively; and

four sideplates configured to connect the first and second brakes and to position a rope between the first and second brakes, each sideplate configured to fit on one of the collars.

17. The device of claim 16, the first and second brakes configured to contact more of the rope when a distance between the first hole and the second hole increases.

18. The device of claim 16, the first and second brakes configured to contact less of the rope when a distance between the first and the second holes decreases.

19. The device of claim 17, the first and second brakes configured to place the rope in an increasingly severe S-shaped bend as the distance between the first hole and the second hole increases.

20. The device of claim 18, the first brake comprising:

- a handle configured to decrease the distance between the first and the second holes.

21. The device of claim 16, the first brake, the second brake, and the four sideplates configured to align the rope that passes through the device in a single plane regardless of the direction that the rope is passing through the device.

22. A rope management device comprising:

an upper brake having an upper bushing affixed to a first sideplate and a second sideplate; and

a lower brake having a lower bushing affixed to a third sideplate and a fourth sideplate,

the upper bushing and the lower bushing configured to function as bearings, as attachment points for a conventional connector, and as spacers that prevent the first and second sideplates from binding the upper brake and that prevent the third and fourth sideplates from binding the lower brake.